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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/782,305

02/18/2004

Akechi Yano

M-15322 US

4271

7590

05/31/2006

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EXAMINER

HAUGLAND, SCOTT J

ART UNIT

PAPER NUMBER

3654

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,305

Applicant(s)

YANO, AKECHI

Examiner

Scott Haugland

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8-11, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Marui et al (U.S. Pat. No. 4,604,794).

Marui et al discloses a roll 1 for feeding a substrate material b comprising: a cylindrical sheet roller having a plurality of salient members 2 disposed on a surface layer of the roller. The salient members 2 cause fold lines perpendicular to the direction of travel of the material b to form across the width of the material. The length of the salient members is approximately the width of the substrate material (col. 1, lines 66 - col. 2, line 2; col. 2, lines 13-15). The salient members comprise resin (col. 1, lines 62-65).

With regard to claim 8, resistance to wrinkle formation is inherently increased when the web is flexed and folded over its resistance when it is straight.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-7, 12-15, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marui et al (U.S. Pat. No. 4,604,794).

Marui et al is described above.

Marui et al does not disclose that one of the salient members has a rounded corner or a circular cross section.

With regard to claims 4, 12, and 19, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the salient members of the apparatus of Marui et al with rounded corners so that the substrate material is folded and not cut.

With regard to claims 5, 6, 13, 14, and 20, it would have been a matter of obvious engineering choice to make the radius of the rounded corner in the claimed ranges since it would require no more than routine experimentation to arrive at suitable radii to prevent cutting of the web. Radii in the claimed range would be suitable for at least some webs that the apparatus is capable of handling.

With regard to claims 7 and 15, it would have been obvious to provide a salient member with a material-engaging surface having a cross section in the form of a

circular arc to ensure that the material is folded and not cut by the salient members. To provide the salient members with a substantially circular cross section would have been obvious since the shape of the non-material contacting portion of the salient members is not critical to the operation of the device and selection of this shape would allow use of standard round stock to form the salient members.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lesse (U.S. Pat. No. 4,838,468) in view of Ver Mehren (U.S. Pat. No. 4,210,318).

Lesse discloses a roll 1 for feeding substrate material comprising: a sheet roller configured to rotate about a first axis and a plurality of salient members 6, 8, 9 on the roller having a width approximately equal to the width of the substrate material. The salient members are configured to cause a fold line to form across a width of said substrate material substantially perpendicular to a direction of travel of said substrate material. Salient members (vertical portions of 6 in Fig. 1) have a substantially rectangular cross section as recited in claims 3, 11, and 19. Salient members 9 have a substantially circular cross section as recited in claims 7 and 15.

Lesse does not explicitly disclose a cylindrical sheet roller on which the salient members are disposed.

Ver Mehren teaches mounting fold-engaging arms on a cylindrical sheet roller 504 to support the arms for rotation about an axis.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Lesse with a cylindrical sheet roller as taught by Ver Mehren to support the salient members for rotation.

With regard to claims 2, 10, and 18, note that the elements 6 and 9 are hatched to indicate a metal.

With regard to claim 4, 12, and 19, note the rounded corner (element 8 and on element 7 adjacent to element 8).

With regard to claims 5, 6, 13, 14, and 20, it would have been a matter of obvious engineering choice to make the radius of the rounded corner in the claimed ranges since it would require no more than routine experimentation to arrive at suitable radii to accomplish the desired effect in Lesse.

With regard to claim 8, resistance to wrinkle formation is inherently increased when the web is flexed (e.g., by passage over the roller) over its resistance when it is straight.

Response to Arguments

Applicant's arguments filed 3/13/06 have been fully considered but they are not persuasive.

Applicant argues that the salient members (raised portions) of the pin wheels of Gomi do not span the width of the paper feed by them. However, the lengths of the salient members 2 of Marui et al and 6, 8, 9 of Lesse are approximately the width of the substrate material that they engage.

Applicant argues that Lesse does not disclose a cylindrical sheet roller.

However, Ver Mehren teaches providing the apparatus of Lesse with a shaft having the form of a cylindrical roller for supporting fold engaging rotating arms. The resulting apparatus would have the claimed cylindrical sheet roller with salient members disposed on it. In addition, Marui et al discloses a cylindrical sheet roller having salient members disposed on it.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. The new grounds of rejection were necessitated by the addition of the limitations that the sheet roller is cylindrical and that the length of the salient members is approximately the width of the substrate material or spans the width of the substrate material. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

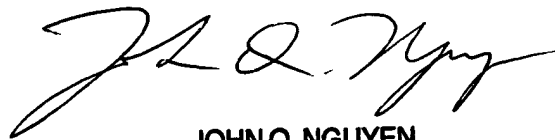
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


sjh
5/16/06


JOHN Q. NGUYEN
PRIMARY EXAMINER